CONTENTS

Number 1

B. Bar-Yosef, A. M. Posner, *and* J. P. Quirk. Zinc Adsorption and Diffusion in Goethite 1

J. A. Ogunwale *and* T. I. Ashaye. Sandstone-derived Soils of a Catena at Iperu, Nigeria 22

J. H. Kyle, A. M. Posner, *and* J. P. Quirk. Kinetics of Isotopic Exchange of Phosphate Adsorbed on Gibbsite 32

K. Koreleski. Types of Soil Degradation on Loess near Kraków . . . 44

R. J. Dowdell *and* R. Q. Cannell. Effect of Ploughing and Direct Drilling on Soil Nitrate Content 53

J. M. Bracewell, G. W. Robertson, *and* G. J. M. Stephen. Humus Type Discrimination from Mass Spectra by a Simplified Statistical Treatment . 62

Edryd Jones. Comparison of Different Forms of Phosphatic Fertilizers. I. Rape and Swedes 66

I. D. Pulford *and* H. L. Duncan. The Influence of Pyrite Oxidation Products on the Adsorption of Phosphate by Coal-mine waste 74

J. P. André. Graphical Representation of Tricationic Exchanges, where one of the Cations is the Proton 81

Number 2

D. Sławinska, J. Sławinski, *and* T. Sarna. The Effect of Light on the ESR Spectra of Humic Acids 93

Koji Wada *and* Hiroshi Kubo. Precipitation of Amorphous Aluminosilicates from Solutions Containing Monomeric Silica and Aluminium Ions . . 100

Martin Richter, Ichiro Mizuno, Santiago Aranguez, *and* Susana Uriarte. Densimetric Fractionation of Soil Organo-Mineral Complexes . 112

D. R. Grant. Measurement of Soil Moisture Near the Surface using a Neutron-Moisture Meter 124

K. E. Anderson *and* P. A. Furley. An Assessment of the Relationship Between the Surface Properties of Chalk Soils and Slope Form using Principal Components Analysis 130

P. H. T. Beckett *and* S. W. Bie. Reconnaissance for Soil Survey. I. Pre-Survey Estimates of the Density of Soil Boundaries Necessary to Produce Pure Mapping Units 144

C. C. Rudeforth. Storing and Processing Data for Soil and Land Use Capability Surveys 155

G. Cruz-Romero *and* (the late) N. T. Coleman. Reactions Responsible for High pH of Na-Saturated Soils and Clays 169

R. Webster *and* H. E. Cuanalo de La C. Soil Transect Correlograms of North Oxfordshire and Their Interpretation 176

Number 3

J. P. Baldwin. A Quantitative Analysis of the Factors Affecting Plant Nutrient Uptake from Some Soils 195

K. M. Goh *and* M. R. Reid. Molecular Weight Distribution of Soil Organic Matter as Affected by Acid Pre-Treatment and Fractionation into Humic and Fulvic Acids 207

R. H. G. Bos *and* J. Sevink. Introduction of Gradational and Pedomorphic Features in Descriptions of Soils. A Discussion of the Soil Horizon Concept with Special Reference to Paleosols 223

CONTENTS

D. J. CAMPBELL. Liquid Limit Determination of Arable Topsoils using a Drop-Cone Penetrometer 234
A. H. FITTER *and* C. D. SUTTON. The Use of the Freundlich Isotherm for Soil Phosphate Sorption Data 241
P. BULLOCK, P. J. LOVELAND, *and* C. P. MURPHY. A Technique for Selective Solution of Iron Oxides in Thin Sections of Soil 247
S. S. S. RĀJAN. Phosphate Adsorption and the Displacement of Structural Silicon in an Allophane Clay 250
S. S. S. RĀJAN *and* K. W. PERROTT. Phosphate Adsorption by Synthetic Amorphous Aluminosilicates 257
H. M. KUNISHI *and* A. W. TAYLOR. The Effect of Phosphate Applications on the Diffusion Coefficients and Available Phosphate in an Acid Soil . . 267
A. H. MACLEAN *and* S. PAWLUK. Soil Genesis in Relation to Groundwater and Soil Moisture Regimes near Vegreville, Alberta 278
D. J. GREENLAND, D. RIMMER, *and* D. PAYNE. Determination of the Structural Stability Class of English and Welsh Soils, using a Water Coherence Test 294
R. N. S. REDDY *and* RAJENDRA PRASAD. Studies on the Mineralization of Urea, Coated Urea, and Nitrification Inhibitor Treated Urea in Soil . 304
M. P. IRELAND. The effect of the Earthworm *Dendrobaena rubida* on the Solubility of Lead, Zinc, and Calcium in Heavy Metal Contaminated Soil in Wales 313
L. J. EVANS *and* W. A. ADAMS. Quantitative Pedological Studies on Soils Derived from Silurian Mudstones. IV. Uniformity of the Parent Material and Evaluation of Internal Standards. 319
L. J. EVANS *and* W. A. ADAMS. Quantitative Pedological Studies on Soils Derived from Silurian Mudstones. V. Redistribution and Loss of Mobilized Constituents 327

Number 4

H. R. ROWSE. Simulation of the Water Balance of Soil Columns and Fallow Soils 337
E. OPUWARIBO *and* C. T. I. ODU. Fixed Ammonium in Nigerian Soils. II. Relationship between Native Fixed Ammonium and some Soil Characteristics 350
E. OPUWARIBO *and* C. T. I. ODU. Fixed Ammonium in Nigerian Soils. III. Capacity of Organic and Inorganic Soil Components to retain Added Ammonium 358
J. L. BREWSTER, A. N. GANCHEVA, *and* P. H. NYE. The Determination of Desorption Isotherms for Soil Phosphate using Low Volumes of Solution and an Anion Exchange Resin 364
WILLEM J. VREEKEN. Principal Kinds of Soil Chronosequences and their Significance in Soil History 378
J. C. RYDEN *and* J. K. SYERS. Rationalization of Ionic Strength and Cation Effects on Phosphate Sorption by Soils 395
I. C. R. HOLFORD *and* G. E. G. MATTINGLY. The High- and Low-Energy Phosphate Adsorbing Surfaces in Calcareous Soils 407
R. LEE *and* D. L. ROWELL. The Effect of Particle Morphology on the K-Ca Exchange Properties of Montmorillonite 418
W. J. MCHARDY *and* A. C. BIRNIE. Scanning Electron Microscope Studies of a Surface Water Gley 426
R. T. BAKER. A New Method for Estimating the Phospholipid Content of Soils 432
G. C. AGGARWAL *and* B. R. TRIPATHI. A Simple and Rapid Method of Soil Water Determination 437